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SOME BREEDING WARBLERS OF DEMAREST, N. J.

BY B. S. BOWDISH.

THIS paper is not put forward as a complete list of all the warblers that have bred around Demarest, for such a paper must needs be the result of many seasons painstaking observation. The present paper deals with such breeding evidence as has come under the necessarily limited observation of the author during the past three seasons.

The Black and White Warbler (*Mniotilta varia*) is a regular, though not abundant, summer resident. Aside from the presence of the birds in pairs during the breeding season, the evidence of its breeding depends on the record of a nest found by Miss Christabel M. Everett in the summer of 1901, and on a pair found by Mr. Abbott and the writer, June 17 last, accompanied by young a few days out of the nest.

The Blue-winged Warbler (*Helminthophila pinus*) is a quite abundant breeder, yet so successfully are the nests concealed, and so closely does the mother bird sit, that the nests are not often found. On June 11, 1904, a nest was found among the rank grass and weeds, in a bush- and weed-grown field, the bottom just above the ground. It was a frail structure, of fine stems and hair, and contained four young but a short time hatched. The female returned to the nest while the camera was within thirty inches of it. On May 12, of the present year, while passing a bushy point of woods jutting into a weed-grown field, I noticed a female Blue-winged Warbler with a dead oak leaf in her bill, and accompanied by her mate. After watching for a few minutes, without being able to track her to the prospective nest, I left, fearing to disturb her. I returned to the spot on the 15th and, without seeing the birds, I chanced quickly on the nest, built under a dead branch, near the base of a small cedar, and entirely covered with dead oak leaves, so laid as to leave only a mouse-like entrance. At this time no eggs had been laid, the nest seeming to be just newly finished. The first egg was laid on the 19th, and one egg added each day, the fifth and last egg being deposited May 23.

The eggs hatched June 2, the tenth day after deposition. On the 4th I found the nest empty, the leaf covering gone, and the parents crying about. A search finally discovered one young bird, still living, directly under the nest. I replaced him and he was cared for by the parents. He was still prospering on the 9th, and the nest being empty on the 14th, I hope he had so developed as to leave it of his own accord.

This mother bird, while incubating, returned to her eggs with the camera close to the nest. Operating with tube and bicycle pump, I made several exposures, and she posed quite motionless for exposures of 30 to 45 seconds, timed by watch. Young several days out of the nest were seen June 17, 1905.

The Yellow Warbler (*Dendroica æstiva*) is an abundant breeding species, arriving early in May, or even before, and departing in September. Here, as elsewhere, this bird seems partial to the bushes growing on or near the banks of streams, for nesting sites. It is exceedingly energetic, both as a larvæ destroyer and a songster.

The Chestnut-sided Warbler (*Dendroica pensylvanica*) is another of our abundant summer birds, and particularly endears itself to the observer by its devotion to nest and contents. June 4, 1904, a nest was found about two feet from the ground in a black-berry bush, at the edge of a wooded and bush-grown creek-bed. It contained four eggs, and even at the first visit, the mother bird would come on the nest while camera and operator were within two feet of it. On several subsequent occasions when I visited the nest, the bird showed the same solicitation for her charge and a growing confidence. June 5 of the present year, a nest was found, three feet up in a berry bush, in a slashing, containing four eggs. These eggs hatched June 14, and a day or two later the young disappeared. It was one of many tragic endings of attempts at house-keeping by the birds, observed this year. The female, while not as confiding as the bird of the previous year, was yet a brave little mother, and posed quite still, for exposures of fifteen seconds.

Black-throated Green Warbler (*Dendroica virens*). This is the one noteworthy record of a breeding warbler for this locality. June 5, 1904, while in a swampy piece of woods, a pair of these birds appeared much disturbed. They soon disappeared, and while still searching, I suddenly saw the female on the nest. The

situation of the nest was quite as much of a surprise as the finding of it in this locality. It was built between the stems of a 'skunk cabbage' plant, and fastened to a catbriar and the twigs of dead bush, and was about fourteen inches from the ground, in a very wet part of the swamp. It contained four eggs, which were fresh. The birds, while solicitous, did not, during our short stay, show the boldness and confidence displayed by the Chestnut-sided and Blue-winged Warblers, about their nests.

The Ovenbird (*Seiurus aurocapillus*) vies with the Yellow Warbler, in the matter of abundance, as many as three nests having been found in a single strip of woods. While allowing close approach to the nest when sitting, the bird seems exceedingly shy of a camera, and has proved one of the almost impossible subjects for photography. A set camera, well concealed, had the effect of keeping the bird from her nest until it was removed. A nest with four eggs was found June 6, 1904, built at the base of a small tree, in open woods. It was, however, destroyed before the young hatched. June 10, of the same year, two more nests were found in the same woods, one containing two eggs, the other four well fledged young. The last was under an open brush heap.

May 22 of the present year, I located a nest then building, near a path, in open woods. May 27, this nest contained three eggs, and the fourth and fifth were laid the 28th and 29th respectively. This bird incubated until the 14th of June, without results. On the latter date I found the nest destroyed. On June 18 a pair of birds was seen, accompanied by young as large as themselves.

The Northern Yellow-throat (*Geothlypis trichas brachidactyla*) appears to be quite as abundant as the Ovenbird. Swampy places where the 'skunk cabbage' grows are favorite nesting sites, the nest being often built among the stalks of this plant, though sometimes in tussocks of grass, and one nest, found this last summer, was in a tangle of dead 'joint grass,' well above the ground. All nests that I have found were in more or less wet places. For 1904 one nest with four fresh eggs was found June 2; another with four fresh eggs, June 5; and a third containing one egg, June 11. During the past summer the nest in the joint grass, previously referred to, was found June 5. It contained four fresh eggs, but was the subject of another of the summer tragedies that are so frequent, before the eggs hatched.

The Yellow-breasted Chat (*Icteria virens*) is a common breeder. Slashings and bush-grown fields, and creek-beds are the favorite sites. A nest containing three eggs was found May 29, 1904. May 24, 1905, I found a nest with four eggs, and another nest just completed. June 1 two of the eggs in the first nest were found to have hatched, the young being then several days old. On the 5th the nest was found to be empty, and the young may possibly have developed so rapidly as to have left of themselves. Another nest containing two eggs was found June 1. Two more eggs were added, and the bird was still sitting on unhatched eggs June 14. On the 19th the nest was empty and deserted.

Hooded Warbler (*Wilsonia mitrata*). Up to the present year I considered this warbler a rare breeder. June 5 a nest with four eggs was found, about one foot from the ground, in a small clump of bushes at the edge of a wood, close to a public road. June 17 and 18, Mr. Clinton G. Abbott and the writer found three pairs of birds with young out of the nest, within half a mile of the first nest. As the latter was destroyed without the eggs hatching, one cannot refrain from the impression that the birds, at least locally, must be fairly abundant breeders.

The American Redstart (*Setophaga ruticilla*) is fairly common, but only one nest has been located in the past three years. On June 3, 1904, a nest was found about ten feet from the ground, on a horizontal limb of an apple tree, beside a road, and a few feet from woods. It contained one egg. June 8 the nest was empty and deserted. A pair of birds with young, several days out of the nest, were seen June 18, of the present year.

In addition to the ten species enumerated, the Louisiana Water-Thrush (*Seiurus motacilla*) undoubtedly breeds regularly, though not abundantly, being frequently seen in pairs during the breeding season. Also there are a number of other species which it is reasonable to expect to breed here, and which I hope we may from time to time add to the list.